LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended): A digital-to-analog converter assembly, comprising:

a delta-sigma modulator that processes a digital input signal to produce a digital output signal having at least one ~~associated~~ high dynamic range frequency band;

a digital-to-analog converter that converts the digital output signal into an analog output signal having the at least one ~~associated~~ high dynamic range frequency band;

an analog filter assembly that filters the analog signal, the analog filter having at least one associated passband; and

a comb filter assembly that attenuates the output of the filter assembly to provide a plurality of attenuating nulls and being tuned such that the attenuating nulls are centered at selected locations within the at least one high dynamic range frequency band of the analog output signal, such that the overall wanted signal to noise of the system is improved ~~improve signal-to-noise ratio~~.

2. (Currently amended): The assembly of claim 1, ~~the comb filter providing a plurality of attenuating nulls and being tuned such that~~ the attenuating nulls ~~are~~ being centered at respective boundaries of the at least one high dynamic range frequency band of the analog output signal such that a given high dynamic range region coincides with the passband of the analog filter assembly.

3. (Cancelled).

4. (Original): The assembly of claim 1, the comb filter comprising at least one delay element and at least one summer.

5. (Currently amended): The assembly of claim 1, further comprising a digital precorrector that predistorts the digital input signal to increase the power of at least one signal of interest within the at least one high dynamic range frequency band as to mitigate the attenuation provided by the comb filter.

6. (Original): The assembly of claim 1, further comprising a frequency control that controls at least one of the analog filter, the comb filter, the delta-sigma modulator, and the digital-to-analog converter to alter frequency characteristics associated with the digital-to-analog converter assembly.

7. (Original): The assembly of claim 6, the frequency control altering the respective duration associated with at least one delay element within the comb filter.

8. (Original): The assembly of claim 6, the assembly further comprising a clock circuit and the frequency control controlling the clock circuit to alter respective center frequencies of at least one high dynamic range region associated with the delta-sigma modulator.

9. (Original): The assembly of claim 1, the filter being a tunable filter, such that respective center frequencies of the at least one passbands can be electronically altered.

10. (Original): The assembly of claim 9, the tunable filter comprising a surface acoustic wave (SAW) filter.

11. (Original): The assembly of claim 9, the filter comprising at least one micromechanical structure that can be electrically configured to change the center frequency of the at least one passband associated with the filter.

12. (Original): The assembly of claim 1, the comb filter comprising a plurality of delay elements and a plurality of summers.

13. (Original): The assembly of claim 1, comprising a plurality of delta-sigma modulators, a given delta-sigma modulator having a high dynamic range frequency band with an associated center frequency.

14 (Currently Amended): The assembly of claim ~~1~~ 13, the high dynamic range frequency bands being adjacent, such that they collectively comprise a contiguous wide frequency band, the comb filter attenuating noise at the boundaries between the bands.

15. (Original): A method of converting a digital input signal into an analog output signal, comprising:

quantizing a digital input signal, having a first word size, to produce a digital output signal having a second word size, the first word size being larger than the second word size;

processing the digital input signal as to shift noise associated with quantizing the digital signal away from at least one frequency band of interest;

converting the quantized digital output signal into an analog signal;

producing a delayed representation of the analog signal;

summing the analog signal and the delayed representation; and

filtering the summed analog signal.

16. (Original): The method of claim 15, further comprising changing a shape associated with the frequency band of interest.

17. (Original): The method of claim 15, further comprising changing a center frequency associated with the frequency band of interest.

18. (Original): The method of claim 15, further comprising changing a delay associated with the production of the delayed representation.

19. (Original): The method of claim 15, further comprising precorrecting the digital input signal to mitigate attenuation introduced by filtering the summed analog signal.

20. (Original): The method of claim 15, the second word size being a one-bit word.

21. (Original): The method of claim 15, further comprising delaying the summed analog signal to form a second delayed representation and adding the summed analog signal to the second delayed representation.

22. (Currently Amended): A digital-to-analog converter assembly, comprising:

means for converting a digital signal to an analog signal, the means for converting having an associated high dynamic range frequency band; and

means for providing attenuating nulls within the analog signal at periodic center frequencies[[;]] associated with the boundaries of the high dynamic range band, the means for providing attenuating nulls comprising means for summing the analog signal with a delayed representation of the analog signal.

23. (Cancelled)

24. (Currently Amended): The assembly of claim ~~23~~ 22, further comprising a means for attenuating noise at frequencies outside of the ~~broadened~~ high dynamic range frequency band.

25. (Original): The assembly of claim 22, further comprising means for precorrecting the digital signal to mitigate attenuation of at least one signal of interest.

26. (Currently Amended): The assembly of claim 22, the means for converting having a plurality of contiguous high dynamic range frequency bands, the means for providing attenuation ~~attenuating~~ providing attenuation at the boundaries between the contiguous frequency bands.

27. (Currently Amended): The assembly of claim 22, further comprising means for changing a shape associated with the high dynamic range frequency band ~~of interest~~.

28. (Currently Amended): The assembly of claim 22, further comprising means for changing a center frequency associated with the high dynamic range frequency band ~~of interest~~.

29. (Cancelled).